IEEE Xplore®
RELEASE 2.1

Welcome United States Patent and Trademark Office

.◻. **Search Results**

BROWSE   SEARCH   IEEE XPLORE GUIDE

Results for "((storage<in>metadata) <and> (redundant <in>metadata))<and> (virtual*..."   ✉ e-mail
Your search matched **3** of **1450046** documents.
A maximum of **100** results are displayed, **25** to a page, sorted by **Relevance** in **Descending** order.

» Search Options

View Session History

New Search

Modify Search

| ((storage<in>metadata) <and> (redundant <in>metadata))<and> (virtual*<in>me | **Search** |

☐ Check to search only within this results set

» Key

Display Format: ◉ Citation   ○ Citation & Abstract

IEEE JNL	IEEE Journal or Magazine
IEE JNL	IEE Journal or Magazine
IEEE CNF	IEEE Conference Proceeding
IEE CNF	IEE Conference Proceeding
IEEE STD	IEEE Standard

⤶ **view selected items**   **Select All** **Deselect All**

☐   1. **Protecting free expression online with Freenet**
Clarke, I.; Miller, S.G.; Hong, T.W.; Sandberg, O.; Wiley, B.;
Internet Computing, IEEE
Volume 6, Issue 1, Jan.-Feb. 2002 Page(s):40 - 49
Digital Object Identifier 10.1109/4236.978368

AbstractPlus | References | Full Text: PDF(440 KB)   IEEE JNL
Rights and Permissions

☐   2. **Design and implementation of reconfigurable gateway array of multiple fi**
Qin Zhang; Peng Li; Jizhong Han; Chengde Han;
Networking, Architecture, and Storages, 2006. NAS '06. International Worksho
1-3 Aug. 2006 Page(s):6 pp.
Digital Object Identifier 10.1109/IWNAS.2006.25

AbstractPlus | Full Text: PDF(152 KB)   IEEE CNF
Rights and Permissions

☐   3. **An efficient BIST method for distributed small buffers**
Jone, W.B.; Huang, D.C.; Wu, S.C.; Lee, K.J.;
Very Large Scale Integration (VLSI) Systems, IEEE Transactions on
Volume 10, Issue 4, Aug. 2002 Page(s):512 - 515
Digital Object Identifier 10.1109/TVLSI.2002.800532

AbstractPlus | References | Full Text: PDF(288 KB)   IEEE JNL
Rights and Permissions

Help   Contact Us   Privacy & :

IEEE Xplore®
RELEASE 2.1

Welcome United States Patent and Trademark Office

:□ **Search Results**   **BROWSE**   **SEARCH**   **IEEE XPLORE GUIDE**

Results for "((storage<in>metadata) <and> (redundant <in>metadata))<and> (virtual*..."   ☑e-mail
Your search matched **3** of **1450046** documents.
A maximum of **100** results are displayed, **25** to a page, sorted by **Relevance** in **Descending** order.

» Search Options

View Session History

New Search

Modify Search

((storage<in>metadata) <and> (redundant <in>metadata))<and> (virtual*<in>me| [**Search**]

□ Check to search only within this results set

» Key

Display Format: ◉ Citation   ○ Citation & Abstract

IEEE JNL	IEEE Journal or Magazine
IEE JNL	IEE Journal or Magazine
IEEE CNF	IEEE Conference Proceeding
IEE CNF	IEE Conference Proceeding
IEEE STD	IEEE Standard

[**view selected items**]   **Select All** **Deselect All**

□   1. **Protecting free expression online with Freenet**
Clarke, I.; Miller, S.G.; Hong, T.W.; Sandberg, O.; Wiley, B.;
Internet Computing, IEEE
Volume 6, Issue 1, Jan.-Feb. 2002 Page(s):40 - 49
Digital Object Identifier 10.1109/4236.978368

AbstractPlus | References | Full Text: PDF(440 KB)   IEEE JNL
Rights and Permissions

□   2. **Design and implementation of reconfigurable gateway array of multiple f**
Qin Zhang; Peng Li; Jizhong Han; Chengde Han;
Networking, Architecture, and Storages, 2006. NAS '06. International Worksho
1-3 Aug. 2006 Page(s):6 pp.
Digital Object Identifier 10.1109/IWNAS.2006.25

AbstractPlus | Full Text: PDF(152 KB)   IEEE CNF
Rights and Permissions

□   3. **An efficient BIST method for distributed small buffers**
Jone, W.B.; Huang, D.C.; Wu, S.C.; Lee, K.J.;
Very Large Scale Integration (VLSI) Systems, IEEE Transactions on
Volume 10, Issue 4, Aug. 2002 Page(s):512 - 515
Digital Object Identifier 10.1109/TVLSI.2002.800532

AbstractPlus | References | Full Text: PDF(288 KB)   IEEE JNL
Rights and Permissions

Help   Contact Us   Privacy & :

Home | Login | Logout | Access Information | Alerts | Sitemap | Help

Welcome United States Patent and Trademark Office

| BROWSE | SEARCH | IEEE XPLORE GUIDE | SUPPORT |

☑ e-mail 🖨 printer friendly

IEEE Xplore® RELEASE 2.1

AbstractPlus

◄ View Search Results | ◄ Previous Article | Next Article ►

Design and implementation of reconfigurable gateway array of multiple fabrics (RGAMF)

Access this document

📄 Full Text: PDF (152 KB)

Download this citation

Choose [Citation & Abstract ▼]

Download [ASCII Text ▼] ▶

» Learn More

Rights and Permissions

» Learn More

Qin Zhang   Peng Li   Jizhong Han   Chengde Han
Inst. of Comput. Technol., Chinese Acad. of Sci., China

Abstract
In today's data center, the demand on server I/O is increasing to transfer huge data between clients and servers or between two servers. Typically, conventional data center uses multiple network adapters to build the server fabric, which bring many drawbacks, such as complex management, hard scalability and expensive cost, and so on. Fortunately, InfiniBand provides a high-bandwidth, low-latency network, and it has been widely used in current data center to create a unified fabric. However, fiber channel and IP fabric are still widely adopted so that many researches have been focused on connecting between InfiniBand and conventional networks. Many methods, such as protocol conversion and bandwidth aggregation, have been proposed to eliminate performance limitation caused by heterogeneous fabrics. Nevertheless, diversity and dynamic requirements of server I/O on data center still didn't be considered. This paper proposes a novel heterogeneous interconnect architecture called RGAMF (reconfigurable gateway array of multiple fabrics), which has five major features: protocol conversion, bandwidth aggregation, **virtual** service mapping, dynamic reconfiguration and **redundant** array. Through verification and evaluation, latency of RGAMF is between 1us and 2us, and the bandwidth of all IP links is close to wire speed at 1Gbps in both directions. Based on the FPGA (field programmable gate array) embedded in each gateway of array, this architecture also provides better flexibility and scalability.

Index Terms
Inspec
    Controlled Indexing
        bandwidth allocation   client-server systems   field programmable gate arrays
        internetworking   protocols   reconfigurable architectures   redundancy

IEEEXplore# Design and implementation of reconfigurable gateway array of multiple fabrics (RGAMF)

Non-controlled Indexing
1 Gbit/s IP fabric IP links InfiniBand bandwidth aggregation data center dynamic
reconfiguration fiber channel field programmable gate array heterogeneous interconnect
architecture high-bandwidth network low-latency network protocol conversion
reconfigurable gateway array of multiple fabrics redundant array server I/O virtual service
mapping

Author Keywords
Not Available

References
No references available on IEEE Xplore.

Citing Documents
No citing documents available on IEEE Xplore.

▼ View Search Results | ◄ Previous Article | Next Article ►

Help   Contact Us   Privacy & Security   IEEE.org

Refine Search

Search Results -

Terms	Documents
L1 and (physical same serial$2)	68

Database:

```
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins
```

Search:

```
L2
```

[Refine Search]

[Recall Text]   [Clear]   [Interrupt]

Search History

DATE: Friday, December 29, 2006   Purge Queries   Printable Copy   Create Case

Set Name	Query	Hit Count	Set Name
side by side			result set
	DB=PGPB; PLUR=YES; OP=OR		
L2	L1 and (physical same serial$2)	68	L2
L1	(storage or disk or disc) same redundant same virtual$7	526	L1

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L3 and (physical same serial$2)	10

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L4

[Refine Search]

[Recall Text] [Clear] [Interrupt]

Search History

DATE: Friday, December 29, 2006   Purge Queries   Printable Copy   Create Case

Set Name	Query	Hit Count	Set Name
side by side			result set
	DB=PGPB; PLUR=YES; OP=OR		
L4	L3 and (physical same serial$2)	10	L4
L3	l1.clm.	40	L3
L2	L1 and (physical same serial$2)	68	L2
L1	(storage or disk or disc) same redundant same virtual$7	526	L1

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
(370/351 |370/431 |370/464 |370/906 |370/910 |710/240 |710/74 |710/300 |710/316 |710/3 |710/36 |710/38 |710/314 |710/315 |711/151 |711/114 |711/154 |711/203 |714/5 |714/6 |714/43).ccls.	15986

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L6

[Refine Search]

[Recall Text ⬍]   [Clear]   [Interrupt]

Search History

DATE: Friday, December 29, 2006   **Purge Queries**   Printable Copy   Create Case

**Set
Name Query**
side by
side

DB=PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR=YES; OP=OR

L6   710/240,74,300,316,3,36,38,314,315;711/151,114,154,203;714/5,6,43;370/351,431,464,906,910.

L5   (storage or disk or disc) same redundant same virtual$7

DB=PGPB; PLUR=YES; OP=OR

L4   L3 and (physical same serial$2)

L3   ll.clm.

L2   L1 and (physical same serial$2)

L1   (storage or disk or disc) same redundant same virtual$7

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L8 and (physical same serial$2)	27

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L9

[Refine Search]

[Recall Text]   [Clear]   [Interrupt]

Search History

DATE: Friday, December 29, 2006   **Purge Queries**   Printable Copy   Create Case

**Set
Name Query**
side by
side
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR
L9   L8 and (physical same serial$2)
L8   L7 and (SVC or PSD or ATA or SCSI)
L7   l5 and L6
L6   710/240,74,300,316,3,36,38,314,315;711/151,114,154,203;714/5,6,43;370/351,431,464,906,910.
L5   (storage or disk or disc) same redundant same virtual$7
DB=PGPB; PLUR=YES; OP=OR
L4   L3 and (physical same serial$2)
L3   l1.clm.
L2   L1 and (physical same serial$2)
L1   (storage or disk or disc) same redundant same virtual$7

END OF SEARCH HISTORY